

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA – SEMESTER I- EXAMINATION –WINTER-2024

Subject Code: MC01094041

Date: 16/01/2025

Subject Name: Object Oriented Programming using JAVA

Time:10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

	Marks
Q.1 (a) Discuss the features of Object-Oriented Programming.	07
(b) Why Data Types are important? Explain Java's primitive data types.	07
Q.2 (a) Explain :this, super, static, final ,finally, Public and garbage collection	07
(b) What is constructor? Explain constructor with its characteristics and appropriate example.	07
OR	
(b) What is Byte Code? Why java is Platform Independent. Explain work of JVM.	07
Q.3 (a) What is class? Explain any one wrapper class with example.	07
(b) Define inheritance? Explain multilevel inheritance with appropriate example.	07
OR	
Q.3 (a) Explain how inheritance, method overriding, and abstract classes are used to support polymorphism	07
(b) Explain this keyword with appropriate example	07
Q.4 (a) What is a package? Explain package with simple example	07
(b) What is Varargs? How to overload varargs methods? Explain with demo example.	07
OR	
Q.4 (a) What is collection framework? Explain set and sorted set interface with example.	07
(b) What is exception? Explain exception handling mechanism with try, catch and finally blocks. Give Suitable example of custom exception.	07
Q.5 (a) How does Java's multithreading capability enable you to write more efficient programs?	07
(b) Explain InputStream class, OutputStream class, Reader class and Writer class with suitable java code.	07
OR	
Q.5 (a) What is generic class? Explain generic method with example	07
(b) What is file? Discuss any six methods of file class.	07